

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/09/99

Date Received: 12/02/99

Project: Metro Self Monitor, PO# M63130

Date Samples Extracted: 12/08/99

Date Extracts Analyzed: 12/08/99

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE
FOR CHROMIUM, COPPER, NICKEL, ZINC
USING METHOD 6010**

Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M63130	0.12	0.16	0.13	0.05
Method Blank	<0.05	<0.05	<0.05	<0.05

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**QUALITY ASSURANCE RESULTS
FOR TOTAL METALS BY
INDUCTIVELY COUPLED PLASMA (ICP)
(METHOD 6010)**

Laboratory Code: 911153-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.12	0.15	22 a	0-20
Copper	mg/L (ppm)	0.16	0.15	6	0-20
Nickel	mg/L (ppm)	0.13	0.15	14	0-20
Zinc	mg/L (ppm)	0.05	0.05	0	0-20

Laboratory Code: 911053-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	% Recovery MS	% Recovery MSD	Acceptance Criteria	RPD
Chromium	mg/L (ppm)	5	0.12	116	115	80-120	1
Copper	mg/L (ppm)	5	0.16	104	106	80-120	2
Nickel	mg/L (ppm)	10	0.13	115	113	80-120	2
Zinc	mg/L (ppm)	5	0.05	124 vo	120	80-120	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recovery LCS	% Recovery LCSD	Acceptance Criteria	RPD
Chromium	mg/L (ppm)	5	120	116	80-120	3
Copper	mg/L (ppm)	5	117	113	80-120	3
Nickel	mg/L (ppm)	10	111	116	80-120	4
Zinc	mg/L (ppm)	5	122 vo	119	80-120	2

a - The analyte was detected at a level less than five times the detection limit. The RPD results may not provide reliable information on the variability of the analysis.

vo - The value reported fell outside the control limits established for this analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Jensen, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
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December 9, 1999

DUPLICATE COPY

INVOICE #99ACU1209-1

Accounts Payable
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

RE: Project Metro Self Monitor Grab-PO# M63130: Results of testing
requested by Gerry Thompson for material submitted on December 2, 1999.

1 water sample analyzed for
Chromium, Copper, Nickel, and Zinc
using Method 6010 @ \$80 per sample

\$ 80.00

Amount Due

\$ 80.00

PLEASE NOTE: As a convenience for our valued clients, we can accept credit cards (VISA, MasterCard or government purchasing cards) for payment on our invoices. Please contact our office if you would like to take advantage of this service.

FEDERAL TAX ID #(b) (6)

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December 9, 1999

Gerry Thompson, Project Manager
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

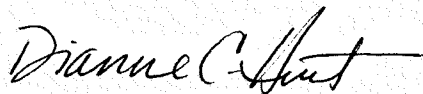
Dear Mr. Thompson:

Included are the results from the testing of material submitted on December 2, 1999 from your Metro Self Monitor, PO# M63130 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Dianne C. Hurt
Project Manager

Enclosures
ACU1209R.DOC